

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated June 8, 2007 has been received and its contents carefully reviewed. Applicants appreciate the indication by the Examiner that claims 5, 6, 10, 12, 15, and 17 recite allowable subject matter.

Claims 1-4, 7-9 11, 13, 14, and 16 are rejected by the Examiner. Claims 5, 6, 10, 12, 15, and 17 are objected to by the Examiner. With this response, claims 1, 13, 15, and 17 are amended. No new matter has been added. Claims 1-17 are currently pending. Reexamination and reconsideration of the pending claims is respectfully requested.

In the Office Action, claims 1-3 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,097,362 to Kim (hereinafter “Kim”) in view of U.S. Patent No. 7,095,393 to Lee (hereinafter “Lee”). Claims 4, 7-9, 11, 14, and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Lee, and further in view of U.S. Patent No. 6,335,721 to Jeong (hereinafter “Jeong”).

The rejection of claims 1-3 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Lee is respectfully traversed and reconsideration is requested.

Independent claim 1 recites a driving apparatus for a liquid crystal display device, having a combination of features including “wherein the digital-to-analog converter array receives a first time-divided pixel data signal from the multiplexer array and generates a first pixel voltage signal level having a first voltage value corresponding to the first time-divided pixel data signal, generates a second pixel voltage signal level having a voltage at least one-step higher in absolute value than the first pixel voltage signal level and corresponding to the first time-divided pixel data signal.” Applicants submit that Kim and Lee, analyzed singly or in combination, do not teach at least this combination of features.

In the Office Action, the Examiner acknowledges that Kim does not disclose “using the pixel voltage signal level with a voltage at least one-step higher in absolute value than the original pixel voltage signal level in correspondence to at least one pixel data” as recited in claim 1. The Examiner cites Lee as allegedly curing this deficiency in Kim. Applicants respectfully

disagree with the Examiner's conclusion that Lee cures the deficiencies in the teachings of Kim. In particular there is no teaching in Lee wherein the digital to analog converter "generates a first pixel voltage signal level having a first voltage value corresponding to the first time-divided pixel data signal, generates a second pixel voltage signal level having a voltage at least one-step higher in absolute value than the first pixel voltage signal level and corresponding to the first time-divided pixel data signal." Accordingly Applicants submit that claim 1 and claims 2 and 3 depending from claim 1 are allowable over the Kim and Lee for at least the reasons given above.

Claim 13 recites a method for driving a liquid crystal display device having a combination of features including "performing time-division on data lines to supply the converted pixel voltage signals thereto, wherein the step of converting the pixel data into the pixel voltage signals includes: generating the pixel voltage signals each having a first pixel voltage signal level corresponding to the first time divided pixel data and a second pixel voltage signal level having a voltage at least one step higher in absolute value than the first pixel voltage signal level in correspondence to the first pixel time divided pixel data." Applicants submit that Kim and Lee do not teach or suggest at least this combination of features.

In rejecting claim 13, the Examiner correctly acknowledges that Kim does not disclose "generating the pixel voltage signals using a pixel voltage signal level having a voltage at least one step higher in absolute value than an original pixel voltage signal level in correspondence to at least one pixel data." The Examiner relies on Lee to cure this deficiency in the teaching of Kim citing in particular the data modifier of FIG. 7 of Lee. Applicants respectfully disagree that Lee cures the above-identified deficiency in the teaching of Kim. As Applicants have discussed above with respect to claim 1, Kim and Lee do not teach or suggest at least "generating the pixel voltage signals each having a first pixel voltage signal level corresponding to the first time divided pixel data and a second pixel voltage signal level having a voltage at least one step higher in absolute value than the first pixel voltage signal level in correspondence to the first pixel time divided pixel data." For at least this reason, Applicants submit that Lee does not cure the deficiencies in the teachings of Kim and that Kim and Lee, analyzed singly or in combination do not teach or suggest the combined features of claim 13. Accordingly, Applicants submit that claim 13 is allowable over Kim and Lee.

The rejection of claims 4, 7-9, 11, 14, and 16 under 35 U.S.C. § 103(a) as being unpatentable over Kim in view of Lee, and further in view of Jeong is respectfully traversed and reconsideration is requested.

Applicants note that claims 4, 7-9 and 11 each depend from claim 1 and each includes by references all of the elements of claim 1.

Applicants respectfully submit that Jeong does not cure the deficiencies of Kim and Lee with respect to the combined features of claim 1 as discussed above. Applicants submit that Kim, Jeong, and Lee, analyzed singly or in any combination do not teach or suggest the combined features of claim 1. Accordingly, Applicants respectfully submit that claim 1 and claims 4, 7-9, and 11 depending from claim 1, are each allowable over Kim, Lee, and Jeong.

Applicants note that claims 14 and 16 each depend from claim 13 and each includes by references all of the elements of claim 13.

As discussed above, Kim and Lee do not teach or suggest the combination of features recited in claim 13. The Examiner cites Jeong to allegedly cure deficiencies in the teachings with respect to elements “one horizontal period is divided into two half horizontal periods and the pixel data are time-divided to be supplied.” Applicants do not reach the Examiner’s conclusion regarding the teachings of Jeong. Applicants submit that Jeong does not cure the deficiencies in the teachings of Kim and Lee regarding the combination of features recited in Kim and Lee and identified above. Applicants submit that Kim, Lee, and Jeong, analyzed singly or in any combination do not teach the combined features recited in claim 13. Accordingly, Applicants submit that claim 13, and claims 14 and 16 depending from claim 13, are each allowable over Kim, Lee, and Jeong.

Claims 5, 6, 10, 12, 15, and 17 are objected to as depending from a rejected base claim but being otherwise allowable. Applicants note that claims 5, 6, 10, 12, 15, and 17 each depend respectively from one of claims 1 and 13. Applicants submit that claims 1 and 13 are allowable at least for the reasons given above, and that claims 5, 6, 10, 12, 15, and 17 each depends from an allowable base claim. Accordingly, Applicants request that the objection to the claims be withdrawn.

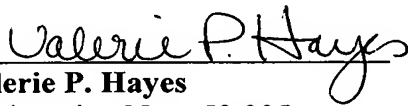
Applicants believe the foregoing application is in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. *A duplicate copy of this sheet is enclosed.*

Dated: November 8, 2007

Respectfully submitted,

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